



THE RESEARCH ABOUT REASONS OF MOUNTAINEERS' ATTEND TO ICE CLIMBING AND ITS EFFECTS ON THEIR SELF-CONFIDENCEⁱ

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Abstract:

The aim of this study was to investigate the reasons why mountaineers participate in ice climbing activities and revealed the effect of this preference their self-confidence. For this, the data was collected in the 2. International Emrah Özbay Ice-climbing Festival, 22-26 January 2016 in Erzurum. The data was collected through "Participation Motivation Questionnaire" by Gill, Gross and Huddleston (1983) which was adapted into Turkish by Oyar et al. (2001); and "the Self-Confidence Scale" developed by Akin (2007). The data collected was analysed through statistical package program (SPSS 16.0) and the results were interpreted. One Way Anova, T-test and correlation statistics were used in statistical analysis. It was observed that the medium of reasons for participation in ice-climbing is low and self-confidence is high. A meaningful relationship was found between these athletes' reasons for participation and their self-confidence ($p < 0,05$). Meaningful results were gathered in terms of gender, marital status, age and years of ice-climbing experience. As a result, there was a reverse relationship between self-confidence and participation in ice-climbing. Self-confidence is an important influence on ice climbing.

Keywords: ice climbing, self-confidence, sports, mountaineering

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1. Introduction

Mountaineering is an activity that involves risks like many other outdoor sports and requires highly education and experience (Gürer et al., 2015). Ice climbing is a risky sport involves risks, accidents and even deaths (Anderson, 2010). Pomfret (2006) defines mountaineering as connectedly nature, an adventure tourism which is done in mountainsides in the world and involves ice climbing, rock climbing and hiking. Modern mountaineering, climbing sports and their varieties have developed as a sports branch which started in the Alps of Europe (Moynier, 2004). In the mid 1980s, some new categories of those sports such as ice climbing, bouldering, speed climbing and artificial climbing have diversified, spread and been popular (Schöffl, 2012).

Ice climbing has increased its popularity among many recreational activities, and it is seen that the number of people doing ice climbing has increased fast (Anderson, 2010). In 2005, approximately 1 million American citizens participated in ice climbing activities. This rate shows an increase % 42 compare with the year 2003 (Outdoor Industry Foundation, 2006). When it comes to the definition of ice climbing, it means a kind of climbing which is done by rope and safely in ice cracks, vertical and rocky surfaces covered by ice, frozen waterfalls and places frozen distinctively in which water courses are provided to leak from vertical places (Schöffl et al., 2010).

Ice climbing generally divides into two disciplines: Alpine Ice Climbing and Water Ice Climbing (Schöffl et al., 2009; Lowe, 1996). An important detail about ice climbing is that it is a sport involving danger (Schöffl, 2012). In the examinations on Pubmed database there are 138 researches on rock climbing, 10 researches on ice climbing, 1821 researches on mountaineering, 5021 researches on the injuries of risky sports and 243 researches on sports deaths (Schöffl et al., 2010).

Although ice climbing is a popular sport, there are too little data about the injuries and accidents (Schöffl et al., 2010). In sport climbing, there are too many injuries (Schöffl et al., 2012). In Alpine climbing, there are lower extremity injuries and they are falling down in general. In some researches on the injuries of ice climbing, it is revealed that the accidents are usually in a small scale (Schöffl et al., 2009; Mosimann, 2006). As it can be seen, mountaineering and ice climbing appear as dangerous and risky sports.

Although the number of injuries on outdoor sports is not high, deaths are encountered in all climbing sports in general (Schöffl, 2012). Mountaineering also requires to have the talent of surviving the hardship to possible difficulties (Moynier, 2004). In ice climbing, there are some objective dangers which may influence on the safety of the climber (Schöffl et al., 2012).

Undoubtedly, during the outdoor sport activities, some factors such as climbing plan, decision making, acting quickly, team work, self-confidence and leadership are quite effective (Gürer et al., 2015). In dangerous sports, such as especially mountaineering, some accidents are explained where over self-confidence brings about some non-recoverable errors (Krakauer, 2006). Self-confidence is an important factor in outdoor sports (Buğdaycı et al., 2016). Feltz (1988) defines self-confidence the belief of the individual himself/herself on fulfilling a certain activity successfully and the trust of the individual of his/her self-judgement, talent, power and decisions rather than a general characteristic of the individual. Self-confidence is a compulsion to reach the success in a sportive (McAuley and Gill, 1983). Although the rate of death and injuries is high in outdoor sports excusing no errors, these highly risky sports increase incrementally their popularity in the western societies. Thus, it is important for the people doing these highly risky sports to know the underlying factors of their behavioural strategies against different risks. Self-confidence is an important factor on making a snap decision in a outdoor sport. It is known that people who have high self-confidence and take risks in outdoor sports take risks and become successful in their daily life (Martha et al., 2009).

In the light of this information, the aim of the research is to examine the reasons of the participation in the ice climbing of the athletes who mountaineer and the reveal of their self-confidence. Ice climbing is an occasional subject to be seen in the books and articles, so this research has a big importance in that way.

2. Method

Ice climbing has spread in Turkey for a few years together with the festivals taken place in Erzurum. Athletes who do frozen waterfall climbing, which is a kind of mountaineering sport, have developed themselves thanks to these festivals. Within this context, our research is limited with the athletes who attended the 2nd International Emrah Özbay Ice Climbing Festival. In the research, questionnaire technique which is a kind of quantitative research method is carried out.

2.1 Population and Sample

In Turkey, the number of athletes mountaineering actively is 5637. (<http://www.tdf.gov.tr>). The population of the research is consisted of athletes doing ice climbing. The sample of the research is consisted of the athletes (77 male, 16 female) attending the ice climbing festival. Since ice climbing is a new field in Turkey, many of the athletes (% 92,5) have an experience for 1-3 year. The data of the research was

collected in the 2nd International Emrah Özbay Ice-climbing Festival, 22-26 January 2016 in Erzurum by the researcher himself.

2.2 Data Collection Tool

In the research, "Motivation Scale for Participating Sport Activities", which was developed by Gill et al., (1983) was translated by Turkish language Çelebi (1993) and was adopted to Turkish by Oyar et al., (2001) is used to determine the reason why the athletes who participate in the ice climbing participate it.

"Self-confidence Scale", which was developed by Akın (2007), is used to examine the self-confidence of the athletes participating in the ice climbing. Motivation Scale for participating in the sport activities consists of the reason why the individual participates in the sport with 30 entries and 8 sub-dimensions (success, physical fitness, team spirit, friendship, entertainment, competition, skills development and movement). The reasons why they participate in the sport are evaluated "Very Important" (1), "Not Very Important" (2) and "No Important" (3) through a triple scale (Gill et al., 1983). Since the self-confidence scale is consists of two sub dimensions: Inner self-confidence is related with the self-confidence of the individuals themselves, and Outer self-confidence is related with the self-confidence of the individuals' external environment and social life. The number of the entries in the self-confidence scale is 33. This scale was prepared as a 5 point Likert Scale. And that's why, the highest point to be got is 165, and the lowest point to be got is 33. The high point taken from the scale having no negative entries shows high level of self-confidence. In the self-confidence scale, less than 2.5 points is low self-confidence, between 2.5 and 3.5 are moderate self-confidence and higher than 3.5 is high level of self-confidence.

2.3 Analysis of Data

The data collected in the research was analysed, and its results were interpreted through data software package (SPSS 22.0). First of all, in order to have an idea about the data, descriptive statistics were consulted such as arithmetic average, standard deviation, frequency and percentage distribution. The data shows a normal and homogenous distribution. To examine the relation between the data and its demographic variables, (Independent samples) t test, which compares quantitative data in the circumstances of being two groups and an objective sample in the comparison between the groups, was carried out. In the circumstances of being more than two groups, One way Anova test was carried out in the comparisons of the parameters' between the groups.

3. Findings

Table 1: The motivation for participating and self-confidence distribution of the athletes according to gender

		Gender	N	Ort.	SS	t	P
Motivation for Participating	Skills Improvement	Male	77	1,1429	,26173	,878	0,382
		Female	16	1,0833	,14907		
	Team Spirit	Male	77	1,2403	,32047	-2,017	0,047*
		Female	16	1,4219	,36192		
	Entertainment	Male	77	1,3084	,29496	2,410	0,018*
		Female	16	1,1250	,15811		
	Friendship	Male	77	1,4242	,33173	,500	0,618
		Female	16	1,3750	,46944		
	Success/Status	Male	77	1,6753	,39873	2,804	0,006*
		Female	16	1,3750	,34157		
	Movement	Male	77	1,2251	,36048	,839	0,404
		Female	16	1,1458	,24248		
	Physical Fitness	Male	77	1,3247	,36134	,927	0,356
		Female	16	1,2375	,22174		
	Competition	Male	77	1,7229	,53092	2,769	0,007*
		Female	16	1,3333	,40369		
Self-confidence	Inner Self-confidence	Male	77	4,1261	,44264	-,338	0,736
		Female	16	4,1691	,55717		
	Outer Self-confidence	Male	77	4,1315	,50538	-,713	0,477
		Female	16	4,2344	,61428		

Table 2: The motivation for participating and self-confidence distribution of the athletes according to marital status

		Marital Status	N	Ort.	SS	t	P
Motivation for Participating	Skills Improvement	Married	22	1,0606	,19616	-1,581	,117
		Single	71	1,1549	,25716		
	Team Spirit	Married	22	1,1136	,12741	-2,624	,010*
		Single	71	1,3204	,36150		
	Entertainment	Married	22	1,3409	,22553	1,212	,229
		Single	71	1,2570	,29872		
	Friendship	Married	22	1,2424	,21036	-2,697	,008*
		Single	71	1,4695	,37619		
	Success/Status	Married	22	1,6545	,34466	,408	,684
		Single	71	1,6141	,42268		
	Movement	Married	22	1,1667	,17059	-,699	,487
		Single	71	1,2254	,38120		
	Physical Fitness	Married	22	1,2364	,21940	-1,153	,252
		Single	71	1,3324	,37024		
	Competition	Married	22	1,6667	,38490	,108	,914

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Self- confidence		Single	71	1,6526	,57026		
	Inner Self-confidence	Married	22	4,1257	,34885	-,090	,928
		Single	71	4,1359	,49302		
	Outer Self-confidence	Married	22	4,1136	,51562	-,363	,718
		Single	71	4,1602	,52904		

Table 3: The motivation for participating and self-confidence distribution of the athletes according to age

		Age	N	Ort.	SS	F	P	Distinction
Motivation for Participating	Skills Improvement	18-25	54	1,1049	,24931	2,285	,066	
		26-30	4	1,3333	,00000			
		31-36	16	1,0833	,22771			
		37-42	10	1,3000	,29187			
		43 and over 43	9	1,1111	,16667			
	Team Spirit	18-25	54	1,3426	,38331	3,812	,007*	1-3
		26-30	4	1,5000	,00000			
		31-36	16	1,0625	,11180			
		37-42	10	1,3000	,25820			
		43 and over 43	9	1,0833	,12500			
	Entertainment	18-25	54	1,2685	,30271	1,764	,143	
		26-30	4	1,6250	,25000			
		31-36	16	1,2656	,26566			
		37-42	10	1,2750	,21890			
		43 and over 43	9	1,1944	,20833			
	Friendship	18-25	54	1,5000	,40825	2,238	,071	
		26-30	4	1,4167	,16667			
		31-36	16	1,3125	,22669			
		37-42	10	1,2000	,28109			
		43 and over 43	9	1,3333	,16667			
	Success/Status	18-25	54	1,5222	,41193	3,647	,009*	1-4
		26-30	4	1,8000	,00000			
		31-36	16	1,6625	,37036			
		37-42	10	2,0000	,32660			
		43 and over 43	9	1,6667	,33166			
	Movement	18-25	54	1,2407	,41166	1,047	,388	
		26-30	4	1,1667	,33333			
		31-36	16	1,1250	,16667			
		37-42	10	1,3333	,22222			
		43 and over 43	9	1,0741	,14699			
	Physical Fitness	18-25	54	1,3704	,38930	2,600	,041*	1-5
		26-30	4	1,5500	,10000			
		31-36	16	1,2125	,24732			
		37-42	10	1,2600	,25033			
		43 and over 43	9	1,0667	,10000			
	Competition	18-25	54	1,5247	,51641	4,645	,002*	1-2
		26-30	4	2,5000	,33333			2-3
		31-36	16	1,6667	,47140			

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Self-confidence		37-42	10	1,9000	,41722	1,778	,140			
		43 and over 43	9	1,7778	,50000					
	Inner Self-confidence	18-25	54	4,1405	,48039					
		26-30	4	3,9559	,61765					
		31-36	16	4,1544	,38596					
		37-42	10	3,8824	,38523					
		43 and over 43	9	4,4118	,38122					
		Outer Self-confidence	18-25	54	4,1748			,50123		
			26-30	4	3,8125			,62500	1-4	
	31-36		16	4,2773	,48625			3,551	,010*	3-4
	37-42		10	3,6938	,46253			4-5		
	43 and over 43		9	4,4236	,46748					

Group 1: 18-25 aged, Group 2: 26-30 aged, Group 3: 31-36 aged, Group 4: 37-42 aged, Group 5: and over 43 p<0.05

Table 4: The motivation for participating and self-confidence distribution of the athletes according to ice climbing experience

		Experience	N	Ort.	SS	t	P
Motivation for Participating	Skills Improvement	1-3 year	86	1,1434	,25330	5,251	,000*
		4-7 year	7	1,0000	,00000		
	Team Spirit	1-3 year	86	1,2878	,33980	3,674	,002*
		4-7 year	7	1,0714	,12199		
	Entertainment	1-3 year	86	1,2820	,28901	,748	,477
		4-7 year	7	1,2143	,22493		
	Friendship	1-3 year	86	1,4186	,36222	,314	,762
		4-7 year	7	1,3810	,29991		
	Success/Status	1-3 year	86	1,6419	,41287	3,178	,007*
		4-7 year	7	1,4000	,16330		
	Movement	1-3 year	86	1,2209	,35281	1,739	,109
		4-7 year	7	1,0952	,16265		
	Physical Fitness	1-3 year	86	1,3256	,34985	3,822	,001*
		4-7 year	7	1,1143	,10690		
	Competition	1-3 year	86	1,6783	,53247	1,662	,138
		4-7 year	7	1,3810	,44840		
Self-confidence	Inner Self-confidence	1-3 year	86	4,0862	,43645	-4,245	,003*
		4-7 year	7	4,7143	,37115		
	Outer Self-confidence	1-3 year	86	4,1090	,51111	-3,047	,017*
		4-7 year	7	4,6429	,44004		

Table 5: The correlation analysis of the athletes' motivation for participating and self-confidence

		Inner Self- confidence	Outer Self- confidence	Skills Dev.	Team Spirit	Entertainment	Friendship	Success/ Status	Movement	Physical Fitness	Competition
Inner Self Confidence	r	1									
	P										
	N										
Outer Self-confidence	r	,848**									
	P	,000	1								
	N	93									
Skills Improvement	r	-,086	-,227*								
	P	,412	,029	1							
	N	93	93								
Team Spirit	r	-,117	-,316**	,417**							
	P	,265	,002	,000	1						
	N	93	93	93							
Entertainment	r	-,356**	-,534**	,401**	,510**	1					
	P	,000	,000	,000	,000						
	N	93	93	93	93						
Friendship	r	-,022	-,177	,163	,259*	,344**					
	P	,832	,090	,119	,012	,001	1				
	N	93	93	93	93	93					
Success/Status	r	-,265*	-,357**	,383**	,190	,316**	,218*				
	P	,010	,000	,000	,068	,002	,036	1			
	N	93	93	93	93	93	93				
Movement	r	-,015	-,201	,393**	,388**	,312**	,330**	,475**			
	P	,889	,053	,000	,000	,002	,001	,000	1		
	N	93	93	93	93	93	93	93			
Physical Fitness	r	,006	-,202	,402**	,437**	,489**	,418**	,412**	,664**		
	P	,955	,053	,000	,000	,000	,000	,000	,000	1	
	N	93	93	93	93	93	93	93	93		
Competition	r	-,289**	-,291**	,325**	,068	,326**	-,002	,718**	,384**	,410**	
	P	,005	,005	,001	,517	,001	,987	,000	,000	,000	1
	N	93	93	93	93	93	93	93	93	93	

*p<0.05 ** p<0.01

According to table 5, significant relations were determined between motivation for participating sports activities and self-confidence. There is a positive relation [$r=.84$; $p<.01$] between inner self-confidence and outer self-confidence. Opposite relations were determined between inner and outer self-confidence and skills improvement, team spirit, entertainment, friendship, success, movement, physical fitness and competition. In general terms, positive relations were determined in the sub-dimensions of motivation for participating sports activities ($p<0.01$, $p<0.05$).

4. Discussion and Conclusions

The aim of this research is to examine the reasons why athletes who mountaineer participate in the ice climbing and to reveal the relation with their self confidence. It is thought that the research is quite important to do training programmes healthier and more productive and to take improving steps for mountaineering, ice climbing and outdoor sports. The motivation for participating and self-confidence were examined according to gender (Table 1), and it was found that athletes participate in the ice climbing mainly for team spirit, entertainment, success and competition. In terms of team spirit, female athletes stand out, but in terms of entertainment, success and competition, male athletes stand out. Statistically significant results weren't reached on self confidence according to gender Anderson (2010); however, thinks that gender is an influence factor on ice-climbing and shows significant relations. According to Mezirow (2000), the team works done in a natural environment encourage and develop self-confidence, self-reflection and social interaction (Cooley et al., 2015). According to female to be in a social environment in ice-climbing might be influential on the constitution of team spirit. Apart from that, that ice-climbing is risky may motivate women to work as a team mainly. According to Schöffl et al., (2012) alpine and ice climbing have more objective dangers to be effective on the safety of the climbers. That men stand out in other sub dimensions mainly may be that they have less risk perception or they have more experience.

The motivation for participating and self-confidence were examined according to the marital status of the athletes were examined (Table 2), and statistically significant relations were found in terms of team spirit and friendship sub dimensions on the athletes' participating in the ice climbing. Statistically significant relations weren't found between marital status and self-confidence. The self-confidence averages of the single ones and the married ones are rather close to each other. Ice climbing is a newly improving sports in Turkey. The single ones participate in the ice climbing more. Jack and Ronan (1998) people who participate in the sports activities being highly risky tend to look for different excitements. The averages of the single ones in terms of team spirit and friendship sub dimensions are higher. It can be said that single ones have more tendency to risky sports more. It can be associated with the fact that single ones have more free time and less familial burden and responsibility. Also to be single provides an advantage to meet different people and to have time with them. Because ice climbing is a dangerous sport, it can be said that married ones tend to it less. The factor such as how the mountaineers spend their days, their friendship environment, their climbing partners and their business life are thought to be related with their marital status.

Spiritual comfort provided by extreme sports should not be ignored (Olivier, 2006). Ice climbing provides more possibilities to single ones for friendship and team spirit.

The motivation for participating and self-confidence were examined according to age variable of the athletes (Table 3), and statistically significant relations were found in terms of the sub dimensions of team spirit, success, physical fitness and competition. Statistically significant relations were found in the sub dimension of team spirit between the age of 18-25 and 31-36, in the sub dimension of success between the age of 18-25 and 37-42, in the sub dimension of physical fitness between the age of 18-25 and 43 and in the sub dimension of competition between the age of 18-25 and 26-30 and also between the age of 26-30 and 31-36. Statistically significant relations were found in the outer self-confidence between the age of 18-25 and 37-42, between the age of 31-36 and 37-42, between the age of 37-42 and aged 43 and above. It is deduced that the older the climbers are the more, even a little, physically decline is seen. Outer self-confidence involves some features such as easy interaction between individuals, expressing himself / herself well, holding emotion in control and taking risks (Akin, 2007). It is seen that ice climbers have high self-confidence. In the research of McGrane et al., (2015) significant positive relations were seen between the physical self-confidence and sporting competence. Self-confidence is one of the most critical features to see a thing through. According to Monasterio et al., (2014) to have a wide variety in the personal characteristics for mountaineers mean having a strong personality profile definition. Accordingly, personal characteristics, like self-confidence, may show differences. Schöffl et al., (2009), in their research, precipitate that age isn't statistically influential on accidents of ice climbing. It can be associated with experience as well. In our research, there is no decisive change as the age gets higher. Schöffl et al., (2009) find that there is a decrease, even a little, in the rate of injuries as the age gets higher.

The motivation for participating and self-confidence were examined according to the experience variable of the athletes (Table 4), and statistically significant results were reached in terms of the sub dimensions of skills improvement, team spirit, success and physical fitness. And in terms of self-confidence, statistically significant results were reached both in inner self-confidence and in the outer self-confidence. The athletes having less experience prefer ice climbing for skills improvement, team spirit, success and physical fitness. The athletes having more experience have higher self-confidence, which is an expected situation. In the ice climbing, technical, tactical, physical and mental skills are crucial (McEwan, 2011). The athletes having more experience have higher skills on the ice climbing, which influence their self-confidence in a positive way. In mountaineering, it is expected from the athletes having more experience and skills to participate in it more (Fix and Loomis, 1997). When the books and articles are examined

about ice climbing, this sport is seen obviously dangerous. In ice climbing, there exist some physical dangers such as avalanche, rocky fields and ice cracks (Schöffl et al., 2010). So as not to pose a risk or to minimise the risk on this sport, it is seen that experience has a key role. Ice climbing, according to its fields to be carried out, has shown a rise in water ice % 55, mix climbing %17, high mountainside %9 and artificial ice fields %6 (Schöffl et al., 2009). Together with this rise, the athlete having more experience can be influenced by self-confidence quite positively. According to the research of Schöffl et al., (2009), the mountaineers who do ice climbing are experienced ones. And the more experience there is the less injury rate is. And they find that mountaineers having more than 10 year experience have less risk to get injured. And it shows that experience has a very important place in ice climbing. It is revealed in our research that self-confidence has also an important place in ice-climbing.

Significant relations were found between the motivation for participating sports activities and self-confidence (Table 5). There is a highly positive relation [$r=.84$; $p<.01$] between inner and outer self-confidence. Opposite relations were determined between inner and outer self-confidence in terms of skills improvement, team spirit, entertainment, friendship, success, movement, physical fitness and competition. In general terms, positive relations were determined in the sub dimensions of motivation for participating sports activities. In the preference on participating for ice climbing, the averages are generally low, and in the self-confidence, the averages are high. That ice climbing is a new sports branch may effect on the participating. There is a strong relation between self-love, self-knowledge of the individual, the individual's determining open targets, identifying strengths and weaknesses (Akin, 2007) and easy interaction between the individuals, expressing himself / herself well, holding emotion in control and taking risks (Akin, 2007). In ice climbing, as the success rises, the ambition for the competition rises. The athletes having high and good physical fitness participate in it for more movement. Climbing skills and climbing experience influence on body balance, climbing flow, protecting climbing speed, altering motor behaviours and the environmental conditions effecting on performance (Seifert et al., 2014). The results of our research support these situations. Self-confidence is important for participating ice-climbing. Many investigations were done about ice climbing and its risks (Burtscher et al., 1997; Schöffl et al., 2009; Boyd et al., 2009). Llewellyn et al., (2008) mentions about the fact that it is counted that mountaineers who have higher self-sufficiency participate in the rock climbing more and more actively and attempt to make harder climbing and also attempt to take more risks. When the risks of ice climbing are considered, self-confidence is influential on taking risks. Addiss and Baker (1989), in their researches, precipitate that the injuries being on snow and ice are more

lethal and more than the ones lived in rock climbing. Correspondingly, the athletes participating in the ice climbing need to be a lot more self-confident.

Consequently, between self-confidence and ice climbing, important relations were found. Although ice climbing is a specific sport and developing in Turkey newly, it is popular to be participated. Important results were reached according to gender, marital status, age and experience. Self-confidence has a key role on ice climbing. The reason why self-confidence has influence on ice climbing is that ice climbing is a dangerous and risky sport. It can be said that self-confidence is influential on performance. Apart from that, people prefer ice climbing for skills improvement, success, physical fitness, competition, team work and friendship. It is seen that experience is an important factor on the reveal of self-confidence. To spend time with extreme sports influence on self-confidence positively. It is suggested that people who do risky sports such as mountaineering and ice climbing should attend the activities which are developer for their self-confidence.

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